IN THE CLAIMS:

1. (currently amended) An anisotropically etched prism light coupling assembly, comprising:

a device portion including a plurality of optical devices arranged in a first fixed pattern, each pair of said plurality of said optical devices spaced a first prescribed distance apart;

a light coupling portion including a plurality of anisotropically etched prisms coupling elements, each one of the plurality of anisotropically etched prisms said coupling elements arranged in second fixed pattern so as to correspond with a respective one of the plurality of optical devices, wherein each one of the pairs of said plurality of anisotropically etched prisms are spaced a second prescribed distance apart, the second prescribed distance substantially equals the first prescribed distance, the light coupling portion is disposed in an aligned arrangement with the device portion; and

an alignment portion that is used to align the light coupling portion and the device portion, wherein each one of said plurality of anisotropically etched prisms are aligned with a respective one of said plurality of optical devices.

- 2. (currently amended) The anisotropically etched prism <u>light coupling</u> assembly of claim 1, further comprising a securing portion wherein each one of said plurality of anisotropically etched <u>prisms are coupling elements is</u> secured relative to a respective one of said plurality of optical devices as aligned.
- 3. (currently amended) The anisotropically etched prism light coupling assembly of claim 2, wherein the securing portion includes material selected from the group consisting of an adhesive material and a bonding material.
- 4. (currently amended) The anisotropically etched prism light coupling assembly of claim 1, wherein each one of the plurality of anisotropically etched waveguide prisms coupling elements and the respective one of the plurality of optical devices combine to form a hybrid active electronic and optical circuit including an active electronic device and at least one of the plurality of optical devices.

- 5. (currently amended) The anisotropically etched prism light coupling assembly of claim 4, wherein the hybrid active electronic and optical circuit comprises an input/output light coupler and an evanescent coupling region, wherein the input/output light coupler is associated with the at least one optical device, and wherein the evanescent coupling region is at least partially formed from a gap portion that couples the input/output light coupler to the at least one optical device using evanescent coupling.
- 6. (currently amended) The anisotropically etched prism <u>light coupling</u> assembly of claim 5, wherein the evanescent coupling region includes a tapered gap portion.
- 7. (currently amended) The anisotropically etched prism <u>light coupling</u> assembly of claim 6, wherein the tapered gap portion enhances coupling efficiency.

8. cancelled

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- 9. (currently amended) The anisotropically etched prism <u>light coupling</u> assembly of claim 5, wherein the evanescent coupling region is at least partially formed using an optically clear adhesive.
- 10. (currently amended) The anisotropically etched prism light coupling assembly of claim 9, wherein the optically clear adhesive secures the input/output light coupler to the evanescent coupling region.
- 11. (currently amended) The anisotropically etched prism light coupling assembly of claim 5, wherein the evanescent coupling region is at least partially formed from air.
- 12. (currently amended) The anisotropically-etched prism light coupling assembly of claim 5, wherein the at least one optical device includes an optical

waveguide having an upper cladding, and the evanescent coupling region and the <u>upper</u> cladding are formed at least partially of the same material.

- 13. (currently amended) The anisotropically etched prism light coupling assembly of claim 12, wherein evanescent coupling region and the upper cladding are at least partially formed of glass.
- 14. (currently amended) The anisotropically etched prism light coupling assembly of claim 12, wherein the evanescent coupling region and the <u>upper</u> cladding are at least partially formed of a polyamide.
- 15. (currently amended) The anisotropically etched prism light coupling assembly of claim 12, wherein the evanescent coupling region and the upper cladding are at least partially formed of an electric insulator.
- 16. (currently amended) The anisotropically etched prism light coupling assembly of claim 15, wherein the electric insulator is also used to partially define active electronics in the hybrid active electronic and optical circuit.
- 17. (currently amended) The anisotropically etched prism light coupling assembly of claim 5, wherein altering an electric voltage applied to the active electronic device affects a free carrier distribution in a region of the at least one optical device, and thereby changes the effective mode index of the at least one optical device.
- 18. (currently amended) The anisotropically etched prism light coupling assembly of claim 17, wherein the at least one optical device includes a waveguide.
- 19. (currently amended) The anisotropically etched prism light coupling assembly of claim 5, wherein the evanescent coupling region is at least partially formed from an optically elean clear polymer.

- 20. (currently amended) The anisotropically etched prism light coupling assembly of claim 5, wherein evanescent coupling region has a thickness of less than 0.5 µm.
- 21. (currently amended) The anisotropically etched prism light coupling assembly of claim 6, wherein the tapered gap portion supports a first edge of the input/output light coupler at a height that is less than 100 microns above a second edge of the input/output coupler.
- 22. (currently amended) The anisotropically etched prism light coupling assembly of claim 21, wherein the second edge is in contact with a waveguide proximate the input/output coupler.
- 23. (currently amended) The anisotropically etched prism light coupling assembly of claim 21, wherein the second edge is out of contact with a waveguide proximate the input/output coupler.
- 24. (currently amended) The anisotropically etched prism light coupling assembly of claim 6, further comprising a ledge that supports the input/output light coupler above the tapered gap portion.
- 25. (currently amended) The anisotropically etched prism light coupling assembly of claim 24, wherein the ledge has a height that is less than 50 microns.
- 26. (currently amended) The anisotropically etched prism light coupling assembly of claim 25, wherein the ledge has a height of less than 3 microns.
- 27. (currently amended) The anisotropically etched prism light coupling assembly of claim 5, wherein the input/output light coupler includes a waveguide prism.

28. (currently amended) The unisotropically etched prism light coupling assembly of claim 6, wherein the input/output light coupler includes a waveguide prism.

29. - 31. cancelled

- 32. (currently amended) The anisotropically etched prism light coupling assembly of claim 5, wherein the input/output light coupler includes a waveguide grating.
- 33. (currently amended) The anisotropically etched prism light coupling assembly of claim 6, wherein the input/output light coupler includes a waveguide grating.

34. - 36. cancelled

- 37. (currently amended) The anisotropically etched prism light coupling assembly of claim 5, wherein the input/output light coupler is at least partially formed from a wafer disposed above the active electronic device and the at least one optical device.
- 38. (currently amended) The anisotropically etched prism light coupling assembly of claim 5, wherein the hybrid active electronic and optical circuit includes a focusing mirror.
- 39. (currently amended) The anisotropically etched prism light coupling assembly of claim 5, wherein the input/output coupler couples light into or out of a waveguide.
- 40. (currently amended) The anisotropically etched prism light coupling assembly of claim 5, wherein the hybrid active electronic and optical circuit includes a Fabry-Perot cavity.

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- 41. (currently amended) The anisotropically etched prism light coupling assembly of claim 5, wherein the hybrid active electronic and optical circuit includes a wavelength division multiplexer modulator.
- 42. (currently amended) The anisotropically etched prism light coupling assembly of claim 5, wherein the hybrid active electronic and optical circuit includes an evanescent coupler.
- 43. (currently amended) The anisotropically etched prism light coupling assembly of claim 5, wherein the hybrid active electronic and optical circuit includes a diode.
- 44. (currently amended) The anisotropically etched prism light coupling assembly of claim 5, wherein the hybrid active electronic and optical circuit includes a transistor.
- 45. (currently amended) The anisotropically etched prism light coupling assembly of claim 1, wherein each anisotropically etched waveguide prism coupling element is a KOH etched waveguide prism.
- 46. (currently amended) The anisotropically etched prism light coupling assembly of claim 1, wherein the device portion includes a silicon on insulator (SOI) flip chip portion.
- 47. (currently amended) The anisotropically etched prism light coupling assembly of claim 1, wherein the light coupling portion includes an optical/electronic I/O flip chip portion.
- 48. (currently amended) The anisotropically etched prism light coupling assembly of claim 1, further comprising an AWG.

- 49. (currently amended) The anisotropically etched prism light coupling assembly of claim 1, further comprising at least one evanescent coupling region associated with each of the plurality of anisotropically etched light coupling portions coupling elements, one of the at least one evanescent coupling regions extending between under at least one of said plurality of anisotropically etched light coupling portions elements and attached to at least one of the plurality of optical devices.
- 50. (currently amended) The anisotropically etched prism light coupling assembly of claim 49, wherein at least one evanescent coupling region is at least partially configured as a gap portion.
- 51. (currently amended) The anisotropically etched prism light coupling assembly of claim 50, wherein the at least one evanescent coupling region includes a tapered gap portion.
- 52. (currently amended) The anisotropically etched prism <u>light coupling</u> assembly of claim 1, wherein the anisotropically etched prism <u>light coupling</u> assembly includes one from the group of a p-n device, a field plated device, a Schottky device, a MOSCAP, and a MOSFET.
- 53. (currently amended) An etched light coupling portion assembly, comprising: a device portion including a plurality of optical devices arranged in a first fixed pattern, each pair of said plurality of optical devices spaced by a first prescribed spacing;
- a light coupling portion wafer including a plurality of etched light coupling elements portions, each one of the plurality of etched light coupling portions elements arranged in a second fixed pattern so as to correspond with a respective one of the plurality of optical devices, wherein each one of the pairs of said plurality of etched light coupling portions are spaced by a second prescribed spacing, the second prescribed spacing substantially equals the first prescribed spacing such that the etched light coupling elements are disposed in an aligned arrangement with respective ones of the optical devices; and

an alignment portion that is used to align the light coupling portion wafer and the device portion, wherein each one of said plurality of etched light coupling portions are aligned with a respect one of said plurality of optical devices.

- 54. (currently amended) The etched light coupling portion assembly of claim 53, further comprising a securing portion wherein each of said plurality of etched light coupling portions elements are secured relative to a respective one of said plurality of optical devices as aligned.
- 55. (currently amended) The etched light coupling portion assembly of claim 54, wherein the securing portion includes one from the group of an adhesive or a bonding bond.
- 56. (currently amended) A method of etching a light coupling portion assembly, comprising:

ctching a device portion including a plurality of optical devices arranged in a first fixed pattern, wherein each pair of said plurality of optical devices is spaced by a first prescribed spacing;

etching a light coupling portion wafer including a plurality of etched light coupling portions elements, wherein each one of the plurality of etched light coupling portions are elements is arranged in a second fixed pattern so as to correspond with a respective one of the plurality of optical devices, and wherein each one of the pairs of said plurality of etched light coupling portions are elements is spaced by a second prescribed spacing, the second prescribed spacing substantially equals equaling the first prescribed spacing; and

aligning the light coupling portion wafer and the device portion, wherein each one of said plurality of etched light coupling portions are elements is aligned with a respective one of said plurality of optical devices.

57. (new) The light coupling assembly as defined in claim 2 wherein the securing portion includes an atomic bonding of the device portion to the light coupling portion.

58. (new) The light coupling portion assembly as defined in claim 53 wherein the light coupling portion wafer includes an evanescent coupling region.